AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of claims:

1. (previously presented) A method of managing a plurality of to-be-managed nodes comprising the steps of:

(a) dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes;

(b) receiving a specification at a source to send a set of one or more messages from the source to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group; and

(c) if each node of the particular group has a return path to the source, then, for each given node of the particular group:

(d) transmitting from the source a packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group, and

(e) waiting to receive at the source a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

2. (previously presented) The method of claim 1 wherein the packet is transmitted to a second one of the given nodes of the particular group at a time of, or after, transmitting the packet to a first one of the given nodes of the particular group but before receipt of the response packet from the first given node of the particular group acknowledging receipt of the packet transmitted thereto.

3. (previously presented) The method of claim 1 wherein each given node of the particular group has a return path to the source and wherein one of the one or more messages in the packet is a request to retrieve a specific information obtainable from each given node of the particular group, the method further comprising the step of:

(f)   receiving from each given node of the particular group a current value of the specific information obtainable from the respective given node.

4. (previously presented) The method of claim 1 wherein each given node of the particular group contains at least a portion of a hierarchically organized management information base (MIB), the method further comprising the step of displaying on a display device the hierarchical organization of the MIB and a list of specific parameters of the MIB to be accessed.

5. (previously presented) The method of claim 4 wherein each given node of the particular group has a return path to the source and wherein one of the one or more messages in

the packet is a request to retrieve a specific information corresponding to the list of specific

parameters, the method further comprising the steps of:

(g)   receiving from each given node of the particular group a current value of the

specific information corresponding to the list of specific parameters, and

(h)   displaying a current value of each specific parameter of the list.

6. (currently amended) A computer readable medium containing a set of executable

instructions for causing a programmable apparatus to perform a ~~signal including said packet~~

~~formed by the~~ method ~~of claim 1~~ of managing a plurality of to-be-managed nodes comprising the

steps of:

(a) dividing a plurality of nodes into one or more groups, including a particular group of

two or more nodes;

(b) receiving a specification at a source to send a set of one or more messages from the

source to the particular group of nodes, the specification designating the particular group and not

specifying any particular node of the particular group; and

(c) if each node of the particular group has a return path to the source, then, for each

given node of the particular group:

(d) transmitting from the source a packet containing a network layer header,

including an address corresponding to the given node, but not the other nodes, of the particular

group, a second header specifying a syntax and semantic by which the packet may be parsed, and

one or more messages of the set, wherein the address corresponding to the given node, in the

packet, is a distinct address that is different from any address corresponding to any other node of

the particular group, and

(e) waiting to receive at the source a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

7. (currently amended) A storage device ~~for storing said signal of claim 6~~ that stores a packet created in accordance with a set of executable instructions, stored on a recordable medium, said set of executable instructions being for causing a programmable apparatus to perform a method of managing a plurality of to-be-managed nodes comprising the steps of:

(a) dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes;

(b) receiving a specification at a source to send a set of one or more messages from the source to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group; and

(c) if each node of the particular group has a return path to the source, then, for each given node of the particular group:

(d) transmitting from the source the packet, the packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group, and

(e) waiting to receive at the source a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

8. (currently amended) A receiver for receiving said signal of claim 6 that receives a packet created in accordance with a set of executable instructions, stored on a recordable medium, said set of executable instructions being for causing a programmable apparatus to perform a method of managing a plurality of to-be-managed nodes comprising the steps of:

(a) dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes;

(b) receiving a specification at a source to send a set of one or more messages from the source to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group; and

(c) if each node of the particular group has a return path to the source, then, for each given node of the particular group:

(d) transmitting from the source the packet, the packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group, and

(e) waiting to receive at the source a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

9. (previously presented) The method of claim 1, wherein the source knows, prior to said step (d), each of said addresses corresponding respectively to one of the given nodes of the particular group.

10. (previously presented) The method of claim 1, further comprising the step (d1) of, prior to said step (d), storing, at the source, each of said addresses corresponding respectively to one of the given nodes of the particular group.

11. (previously presented) The method of claim 1, further comprising, prior to said step (d), a step (d1) of obtaining, at the source, each of said addresses corresponding respectively to one of the given nodes of the particular group.

12. (previously presented) The method of claim 1, wherein said step (d) enables the source to control a rate of transmission of packets to the given nodes of the particular group.

13. (previously presented) The method of claim 1, wherein said step (d) enables the source to control a rate of reception of response packets from the given nodes of the particular group.

14. (previously presented) The method of claim 1, wherein said step (d) enables the source to control how many of the given nodes of the particular group issue a response packet to the source within a given time period.

15. (previously presented) The method of claim 1, further comprising the step of:

(a1) prior to said step (a), obtaining, at the source, a plurality of addresses, each of the plurality of addresses being a unicast address for a respective one of the given nodes of the particular group,

wherein said step (a) of dividing, performed subsequent to obtaining the plurality of addresses, is achievable entirely at the source without communication of messages from or to the source and without communication of messages among any of the plurality of to-be-managed nodes.

16. (previously presented) Source apparatus for managing a plurality of to-be-managed nodes, comprising:

(a) a control unit for dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes;

(b) a reception unit for receiving a specification to send a set of one or more messages from the source apparatus to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group; and

(c) a transmission unit for, if each node of the particular group has a return path to the source, then, for each given node of the particular group:

(d) transmitting a packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group, the source apparatus waiting to receive a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

17. (previously presented) The source apparatus of claim 16 wherein the packet is transmitted to a second one of the given nodes of the particular group at a time of, or after, transmitting the packet to a first one of the given nodes of the particular group but before receipt of the response packet from the first given node of the particular group acknowledging receipt of the packet transmitted thereto.

18. (previously presented) The source apparatus of claim 16 wherein each given node of the particular group has a return path to the source apparatus and wherein one of the one or more

messages in the packet is a request to retrieve a specific information obtainable from each given node of the particular group, the reception unit further receiving from each given node of the particular group a current value of the specific information obtainable from the respective given node.

19. (previously presented) The source apparatus of claim 16 wherein each given node of the particular group contains at least a portion of a hierarchically organized management information base (MIB), the source apparatus further comprising a display device for displaying the hierarchical organization of the MIB and a list of specific parameters of the MIB to be accessed.

20. (previously presented) The source apparatus of claim 19 wherein each given node of the particular group has a return path to the source apparatus and wherein one of the one or more messages in the packet is a request to retrieve a specific information corresponding to the list of specific parameters, wherein the reception unit receives from each given node of the particular group a current value of the specific information corresponding to the list of specific parameters, and the display device displays a current value of each specific parameter of the list.

21. (currently amended) A computer readable medium containing a set of executable instructions for causing a programmable source apparatus to form a signal including said a packet formed by the source apparatus of claim 16 by managing a plurality of to-be-managed nodes, said source apparatus comprising:

(a) a control unit for dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes;

(b) a reception unit for receiving a specification to send a set of one or more messages from the source apparatus to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group; and

(c) a transmission unit for, if each node of the particular group has a return path to the source, then, for each given node of the particular group:

(d) transmitting the packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group, the source apparatus waiting to receive a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

22. (currently amended) A storage device ~~for storing said signal of claim 20~~ that stores a packet created in accordance with a set of executable instructions, stored on a recordable medium, said set of executable instructions being for causing a programmable source apparatus to form a signal including the packet by managing a plurality of to-be-managed nodes, said source apparatus comprising:

(a) a control unit for dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes;

(b) a reception unit for receiving a specification to send a set of one or more messages from the source apparatus to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group; and

(c) a transmission unit for, if each node of the particular group has a return path to the source, then, for each given node of the particular group:

(d) transmitting the packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group, the source apparatus waiting to receive a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

23. (currently amended) A receiver ~~for receiving said signal of claim 20~~ that receives a packet created in accordance with a set of executable instructions, stored on a recordable medium, said set of executable instructions being for causing a programmable source apparatus to form a signal including the packet by managing a plurality of to-be-managed nodes, said source apparatus comprising:

(a) a control unit for dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes;

(b) a reception unit for receiving a specification to send a set of one or more messages from the source apparatus to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group; and

(c) a transmission unit for, if each node of the particular group has a return path to the source, then, for each given node of the particular group:

(d) transmitting the packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group, the source apparatus waiting to receive a response packet acknowledging proper receipt of the packet from the given node,

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed.

24. (previously presented) The source apparatus of claim 16, wherein the source apparatus knows, prior to transmitting the packet from the source, each of the addresses corresponding respectively to one of the given nodes of the particular group.

25. (previously presented) The source apparatus of claim 16, wherein, prior to transmitting the packet from the source, the source stores each of the addresses corresponding respectively to one of the given nodes of the particular group.

26. (previously presented) The source apparatus of claim 16, wherein, prior to transmitting the packet from the source, the source obtains each of the addresses corresponding respectively to one of the given nodes of the particular group.

27. (previously presented) The source apparatus of claim 16, wherein the transmission unit, by transmitting the packet containing the network layer header, including the address corresponding to the given node, but not the other nodes, of the particular group, enables the source apparatus to control a rate of transmission of packets to the given nodes of the particular group.

28. (previously presented) The source apparatus of claim 16, wherein the transmission unit, by transmitting the packet containing the network layer header, including the address corresponding to the given node, but not the other nodes, of the particular group, enables the source apparatus to control a rate of reception of response packets from the given nodes of the particular group.

29. (previously presented) The source apparatus of claim 16, wherein the transmission unit, by transmitting the packet containing the network layer header, including the address corresponding to the given node, but not the other nodes, of the particular group, enables the

source apparatus to control how many of the given nodes of the particular group issue a response packet to the source apparatus within a given time period.

30. (previously presented) The source apparatus of claim 16, wherein, prior to diving the plurality of nodes, the control unit obtains a plurality of addresses, each of the plurality of addresses being a unicast address for a respective one of the given nodes of the particular group,

wherein, subsequent to obtaining the plurality of addresses, the control unit achieves division of the plurality of nodes entirely at the control unit without communication of messages from or to the control unit and without communication of messages among any of the plurality of to-be-managed nodes.